



Analytical Laboratory

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13339 Hagers Ferry Road
Huntersville, NC 28078-7929
McGuire Nuclear Complex - MG03A2
Phone: 980-875-5245 Fax: 980-875-4349

Order Summary Report

Order Number: J12090236

Customer Name(s): ALlen Stowe, Donna Burrell

Customer Address: 8320 NC Hwy 150 East
Mail Code: Marshall Steam Station
Terrell, NC 28682

Lab Contact: Jason C Perkins **Phone:** 980-875-5348

Report Authorized By: _____ **Date:** 10/10/2012
(Signature)

Program Comments:

Please contact the Program Manager (Jason C Perkins) with any questions regarding this report.

Data Flags & Calculations:

Any analytical tests or individual analytes within a test flagged with a Qualifier indicate a deviation from the method quality system or quality control requirement. The qualifier description is found at the end of the Certificate of Analysis (sample results) under the qualifiers heading. All results are reported on a dry weight basis unless otherwise noted. Subcontracted data included on the Duke Certificate of Analysis is to be used as information only. Certified vendor results can be found in the subcontracted lab final report. Duke Energy Analytical Laboratory subcontracts analyses to other vendor laboratories that have been qualified by Duke Energy to perform these analyses except where noted.

Data Package:

This data package includes analytical results that are applicable only to the samples described in this narrative. An estimation of the uncertainty of measurement for the results in the report is available upon request. This report shall not be reproduced, except in full, without the written consent of the Analytical Laboratory. Please contact the Analytical laboratory with any questions. The order of individual sections within this report is as follows:

Job Summary Report, Sample Identification, Technical Validation of Data Package, Analytical Laboratory Certificate of Analysis, Analytical Laboratory QC Reports, Sub-contracted Laboratory Results, Customer Specific Data Sheets, Reports & Documentation, Customer Database Entries, Test Case Narratives, Chain of Custody (COC)

Certification:

The Analytical Laboratory holds the following State Certifications : North Carolina (DENR) Certificate #248, South Carolina (DHEC) Laboratory ID # 99005. Contact the Analytical Laboratory for definitive information about the certification status of specific methods.

Sample ID's & Descriptions:

Sample ID	Plant/Station	Collection Date and Time	Collected By	Sample Description
2012019999	MARSHALL	14-Sep-12 9:55 AM	Josh Quinn	SOURCE WATER
2012020000	MARSHALL	14-Sep-12 9:52 AM	Josh Quinn	SOURCE WATER HG BLK
2012020001	MARSHALL	14-Sep-12 9:15 AM	Josh Quinn	BOTTOM ASH SLUICE WATER
2012020002	MARSHALL	14-Sep-12 7:40 AM	Josh Quinn	BOTTOM ASH SLUICE WATER HG BLK
2012020003	MARSHALL	14-Sep-12	JAY PERKINS	TRIP BLANK
2012020004	MARSHALL	14-Sep-12 7:45 AM	Josh Quinn	FIELD BLANK
2012020005	MARSHALL	14-Sep-12 9:15 AM	Josh Quinn	BOTTOM ASH
7 Total Samples				

Technical Validation Review

Checklist:

COC and .pdf report are in agreement with sample totals and analyses (compliance programs and procedures).

☒ Yes

☐ No

All Results are less than the laboratory reporting limits.

☐ Yes

☒ No

All laboratory QA/QC requirements are acceptable.

☒ Yes

☐ No

Report Sections Included:

☒ Job Summary Report

☒ Sample Identification

☒ Technical Validation of Data Package

☒ Analytical Laboratory Certificate of Analysis

☐ Analytical Laboratory QC Report

☒ Sub-contracted Laboratory Results

☐ Customer Specific Data Sheets, Reports, & Documentation

☐ Customer Database Entries

☒ Chain of Custody

☒ Electronic Data Deliverable (EDD) Sent Separately

Reviewed By: DataBase Administrator

Date: 10/10/2012

Certificate of Laboratory Analysis

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*This report shall not be reproduced, except in full.***Order # J12090236**

Site: SOURCE WATER

Collection Date: 14-Sep-12 9:55 AM

Sample #: 2012019999

Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
<u>MERCURY 1631 - (Analysis Performed by Brooks Rand Labs LLC)</u>								
Vendor Parameter	Complete					Vendor Method		V_BRAND
<u>TOTAL RECOVERABLE METALS BY ICP</u>								
Aluminum (Al)	0.064	mg/L		0.005	1	EPA 200.7	09/25/2012 14:23	DJSULL1
Barium (Ba)	0.023	mg/L		0.005	1	EPA 200.7	09/25/2012 14:23	DJSULL1
Boron (B)	0.086	mg/L		0.05	1	EPA 200.7	09/25/2012 14:23	DJSULL1
Calcium (Ca)	5.16	mg/L		0.01	1	EPA 200.7	09/25/2012 14:23	DJSULL1
Iron (Fe)	0.245	mg/L		0.01	1	EPA 200.7	09/25/2012 14:23	DJSULL1
Magnesium (Mg)	2.20	mg/L		0.005	1	EPA 200.7	09/25/2012 14:23	DJSULL1
Manganese (Mn)	0.680	mg/L		0.005	1	EPA 200.7	09/25/2012 14:23	DJSULL1
Potassium (K)	1.75	mg/L		0.1	1	EPA 200.7	09/25/2012 14:23	DJSULL1
Sodium (Na)	4.23	mg/L		0.05	1	EPA 200.7	09/25/2012 14:23	DJSULL1
Tin (Sn)	< 0.01	mg/L		0.01	1	EPA 200.7	09/25/2012 14:23	DJSULL1
<u>TOTAL RECOVERABLE METALS BY ICP-MS</u>								
Antimony (Sb)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:42	KRICHR
Arsenic (As)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:42	KRICHR
Beryllium (Be)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:42	KRICHR
Cadmium (Cd)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:42	KRICHR
Chromium (Cr)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:42	KRICHR
Cobalt (Co)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:42	KRICHR
Copper (Cu)	1.26	ug/L		1	1	EPA 200.8	09/21/2012 10:42	KRICHR
Lead (Pb)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:42	KRICHR
Molybdenum (Mo)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:42	KRICHR
Nickel (Ni)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:42	KRICHR
Selenium (Se)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:42	KRICHR
Silver (Ag)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:42	KRICHR
Strontium (Sr)	39.0	ug/L		1	1	EPA 200.8	09/21/2012 10:42	KRICHR
Thallium (Tl)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:42	KRICHR
Zinc (Zn)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:42	KRICHR

Site: SOURCE WATER HG BLK

Collection Date: 14-Sep-12 9:52 AM

Sample #: 2012020000

Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
<u>MERCURY 1631 - (Analysis Performed by Brooks Rand Labs LLC)</u>								
Vendor Parameter	Complete					Vendor Method		V_BRAND

Certificate of Laboratory Analysis

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*This report shall not be reproduced, except in full.***Order # J12090236**

Site: BOTTOM ASH SLUICE WATER

Collection Date: 14-Sep-12 9:15 AM

Sample #: 2012020001

Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
<u>MERCURY 1631 - (Analysis Performed by Brooks Rand Labs LLC)</u>								
Vendor Parameter	Complete					Vendor Method		V_BRAND
<u>TOTAL RECOVERABLE METALS BY ICP</u>								
Aluminum (Al)	0.596	mg/L		0.005	1	EPA 200.7	09/25/2012 14:58	DJSULL1
Barium (Ba)	0.035	mg/L		0.005	1	EPA 200.7	09/25/2012 14:58	DJSULL1
Boron (B)	0.097	mg/L		0.05	1	EPA 200.7	09/25/2012 14:58	DJSULL1
Calcium (Ca)	6.83	mg/L		0.01	1	EPA 200.7	09/25/2012 14:58	DJSULL1
Iron (Fe)	0.598	mg/L		0.01	1	EPA 200.7	09/25/2012 14:58	DJSULL1
Magnesium (Mg)	2.34	mg/L		0.005	1	EPA 200.7	09/25/2012 14:58	DJSULL1
Manganese (Mn)	0.615	mg/L		0.005	1	EPA 200.7	09/25/2012 14:58	DJSULL1
Potassium (K)	1.86	mg/L		0.1	1	EPA 200.7	09/25/2012 14:58	DJSULL1
Sodium (Na)	4.48	mg/L		0.05	1	EPA 200.7	09/25/2012 14:58	DJSULL1
Tin (Sn)	< 0.01	mg/L		0.01	1	EPA 200.7	09/25/2012 14:58	DJSULL1
<u>TOTAL RECOVERABLE METALS BY ICP-MS</u>								
Antimony (Sb)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:45	KRICHR
Arsenic (As)	4.40	ug/L		1	1	EPA 200.8	09/21/2012 10:45	KRICHR
Beryllium (Be)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:45	KRICHR
Cadmium (Cd)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:45	KRICHR
Chromium (Cr)	1.71	ug/L		1	1	EPA 200.8	09/21/2012 10:45	KRICHR
Cobalt (Co)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:45	KRICHR
Copper (Cu)	3.62	ug/L		1	1	EPA 200.8	09/21/2012 10:45	KRICHR
Lead (Pb)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:45	KRICHR
Molybdenum (Mo)	1.79	ug/L		1	1	EPA 200.8	09/21/2012 10:45	KRICHR
Nickel (Ni)	1.67	ug/L		1	1	EPA 200.8	09/21/2012 10:45	KRICHR
Selenium (Se)	1.16	ug/L		1	1	EPA 200.8	09/21/2012 10:45	KRICHR
Silver (Ag)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:45	KRICHR
Strontium (Sr)	70.2	ug/L		1	1	EPA 200.8	09/21/2012 10:45	KRICHR
Thallium (Tl)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:45	KRICHR
Zinc (Zn)	1.45	ug/L		1	1	EPA 200.8	09/21/2012 10:45	KRICHR

Site: BOTTOM ASH SLUICE WATER HG BLK

Collection Date: 14-Sep-12 7:40 AM

Sample #: 2012020002

Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
<u>MERCURY 1631 - (Analysis Performed by Brooks Rand Labs LLC)</u>								
Vendor Parameter	Complete					Vendor Method		V_BRAND

Certificate of Laboratory Analysis

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Site: TRIP BLANK
Collection Date: 14-Sep-12

Sample #: 2012020003
Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
<u>MERCURY 1631 - (Analysis Performed by Brooks Rand Labs LLC)</u>								
Vendor Parameter	Complete					Vendor Method		V_BRAND
<u>TOTAL RECOVERABLE METALS BY ICP</u>								
Aluminum (Al)	< 0.005	mg/L		0.005	1	EPA 200.7	09/25/2012 14:47	DJSULL1
Barium (Ba)	< 0.005	mg/L		0.005	1	EPA 200.7	09/25/2012 14:47	DJSULL1
Boron (B)	< 0.05	mg/L		0.05	1	EPA 200.7	09/25/2012 14:47	DJSULL1
Calcium (Ca)	0.017	mg/L		0.01	1	EPA 200.7	09/25/2012 14:47	DJSULL1
Iron (Fe)	< 0.01	mg/L		0.01	1	EPA 200.7	09/25/2012 14:47	DJSULL1
Magnesium (Mg)	< 0.005	mg/L		0.005	1	EPA 200.7	09/25/2012 14:47	DJSULL1
Manganese (Mn)	< 0.005	mg/L		0.005	1	EPA 200.7	09/25/2012 14:47	DJSULL1
Potassium (K)	< 0.1	mg/L		0.1	1	EPA 200.7	09/25/2012 14:47	DJSULL1
Sodium (Na)	< 0.05	mg/L		0.05	1	EPA 200.7	09/25/2012 14:47	DJSULL1
Tin (Sn)	< 0.01	mg/L		0.01	1	EPA 200.7	09/25/2012 14:47	DJSULL1
<u>TOTAL RECOVERABLE METALS BY ICP-MS</u>								
Antimony (Sb)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:48	KRICHR
Arsenic (As)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:48	KRICHR
Beryllium (Be)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:48	KRICHR
Cadmium (Cd)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:48	KRICHR
Chromium (Cr)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:48	KRICHR
Cobalt (Co)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:48	KRICHR
Copper (Cu)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:48	KRICHR
Lead (Pb)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:48	KRICHR
Molybdenum (Mo)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:48	KRICHR
Nickel (Ni)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:48	KRICHR
Selenium (Se)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:48	KRICHR
Silver (Ag)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:48	KRICHR
Strontium (Sr)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:48	KRICHR
Thallium (Tl)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:48	KRICHR
Zinc (Zn)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:48	KRICHR

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Site: FIELD BLANK

Collection Date: 14-Sep-12 7:45 AM

Sample #: 2012020004

Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
TOTAL RECOVERABLE METALS BY ICP								
Aluminum (Al)	< 0.005	mg/L		0.005	1	EPA 200.7	09/25/2012 14:50	DJSULL1
Barium (Ba)	< 0.005	mg/L		0.005	1	EPA 200.7	09/25/2012 14:50	DJSULL1
Boron (B)	< 0.05	mg/L		0.05	1	EPA 200.7	09/25/2012 14:50	DJSULL1
Calcium (Ca)	0.010	mg/L		0.01	1	EPA 200.7	09/25/2012 14:50	DJSULL1
Iron (Fe)	< 0.01	mg/L		0.01	1	EPA 200.7	09/25/2012 14:50	DJSULL1
Magnesium (Mg)	< 0.005	mg/L		0.005	1	EPA 200.7	09/25/2012 14:50	DJSULL1
Manganese (Mn)	< 0.005	mg/L		0.005	1	EPA 200.7	09/25/2012 14:50	DJSULL1
Potassium (K)	< 0.1	mg/L		0.1	1	EPA 200.7	09/25/2012 14:50	DJSULL1
Sodium (Na)	< 0.05	mg/L		0.05	1	EPA 200.7	09/25/2012 14:50	DJSULL1
Tin (Sn)	< 0.01	mg/L		0.01	1	EPA 200.7	09/25/2012 14:50	DJSULL1

TOTAL RECOVERABLE METALS BY ICP-MS

Antimony (Sb)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:52	KRICHR
Arsenic (As)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:52	KRICHR
Beryllium (Be)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:52	KRICHR
Cadmium (Cd)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:52	KRICHR
Chromium (Cr)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:52	KRICHR
Cobalt (Co)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:52	KRICHR
Copper (Cu)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:52	KRICHR
Lead (Pb)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:52	KRICHR
Molybdenum (Mo)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:52	KRICHR
Nickel (Ni)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:52	KRICHR
Selenium (Se)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:52	KRICHR
Silver (Ag)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:52	KRICHR
Strontium (Sr)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:52	KRICHR
Thallium (Tl)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:52	KRICHR
Zinc (Zn)	< 1	ug/L		1	1	EPA 200.8	09/21/2012 10:52	KRICHR

Site: BOTTOM ASH

Collection Date: 14-Sep-12 9:15 AM

Sample #: 2012020005

Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
MERCURY (COLD VAPOR) IN SOLIDS - (Analysis Performed by Test America)								
Vendor Parameter	Complete					Vendor Method		V_T. America

Certificate of Laboratory Analysis

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*This report shall not be reproduced, except in full.***Order # J12090236**

Site: BOTTOM ASH

Sample #: 2012020005

Collection Date: 14-Sep-12 9:15 AM

Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
<u>TOTAL METALS BY ICP</u>								
Aluminum (Al)	3110	mg/Kg		6.67	20	EPA 6010b	09/27/2012 09:45	MHH7131
Antimony (Sb)	< 2	mg/Kg		2	1	EPA 6010b	09/27/2012 09:45	MHH7131
Barium (Ba)	47.8	mg/Kg		0.333	1	EPA 6010b	09/27/2012 09:45	MHH7131
Beryllium (Be)	0.638	mg/Kg		0.333	1	EPA 6010b	09/27/2012 09:45	MHH7131
Boron (B)	15.2	mg/Kg		3.33	1	EPA 6010b	09/27/2012 09:45	MHH7131
Cadmium (Cd)	0.496	mg/Kg		0.333	1	EPA 6010b	09/27/2012 09:45	MHH7131
Calcium (Ca)	2290	mg/Kg		13.3	20	EPA 6010b	09/27/2012 09:45	MHH7131
Chromium (Cr)	9.50	mg/Kg		0.333	1	EPA 6010b	09/27/2012 09:45	MHH7131
Cobalt (Co)	3.43	mg/Kg		0.333	1	EPA 6010b	09/27/2012 09:45	MHH7131
Copper (Cu)	7.09	mg/Kg		0.333	1	EPA 6010b	09/27/2012 09:45	MHH7131
Iron (Fe)	8050	mg/Kg		13.3	20	EPA 6010b	09/27/2012 09:45	MHH7131
Magnesium (Mg)	359	mg/Kg		0.333	1	EPA 6010b	09/27/2012 09:45	MHH7131
Manganese (Mn)	44.1	mg/Kg		0.333	1	EPA 6010b	09/27/2012 09:45	MHH7131
Molybdenum (Mo)	0.949	mg/Kg		0.333	1	EPA 6010b	09/27/2012 09:45	MHH7131
Nickel (Ni)	8.28	mg/Kg		0.333	1	EPA 6010b	09/27/2012 09:45	MHH7131
Potassium (K)	290	mg/Kg		6.67	1	EPA 6010b	09/27/2012 09:45	MHH7131
Selenium (Se)	< 2	mg/Kg		2	1	EPA 6010b	09/27/2012 09:45	MHH7131
Silver (Ag)	< 0.333	mg/Kg		0.333	1	EPA 6010b	09/27/2012 09:45	MHH7131
Sodium (Na)	81.5	mg/Kg		3.33	1	EPA 6010b	09/27/2012 09:45	MHH7131
Strontium (Sr)	69.1	mg/Kg		0.333	1	EPA 6010b	09/27/2012 09:45	MHH7131
Thallium (Tl)	< 4	mg/Kg		4	1	EPA 6010b	09/27/2012 09:45	MHH7131
Titanium (Ti)	175	mg/Kg		0.333	1	EPA 6010b	09/27/2012 09:45	MHH7131
Zinc (Zn)	4.81	mg/Kg		0.333	1	EPA 6010b	09/27/2012 09:45	MHH7131

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Nashville

2960 Foster Creighton Drive

Nashville, TN 37204

Tel: (615)726-0177

TestAmerica Job ID: 490-6842-1

Client Project/Site: Marshall Bottom Ash J12090236

For:

Duke Energy Corporation

13339 Hagers Ferry Road

Huntersville, North Carolina 28078

Attn: Lab Customer



Authorized for release by:

9/24/2012 6:48:21 PM

Shali Brown

Project Manager I

shali.brown@testamericainc.com

LINKS

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Sample Summary

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Client: Duke Energy Corporation
Project/Site: Marshall Bottom Ash J12090236

TestAmerica Job ID: 490-6842-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-6842-1	Bottom Ash	Solid	09/14/12 09:15	09/18/12 09:00

1

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Case Narrative

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Client: Duke Energy Corporation
Project/Site: Marshall Bottom Ash J12090236

TestAmerica Job ID: 490-6842-1

Job ID: 490-6842-1

Laboratory: TestAmerica Nashville

Narrative

CASE NARRATIVE

Client: Duke Energy Corporation

Project: Marshall Bottom Ash J12090236

Report Number: 490-6842-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Nashville attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 09/18/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 19.4 C.

Except: Method(s) 7471B: The following sample(s) was received at the laboratory outside the required temperature criteria: Bottom Ash (490-6842-1).

MERCURY

Sample Bottom Ash (490-6842-1) was analyzed for mercury in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 09/21/2012.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

PERCENT SOLIDS

Sample Bottom Ash (490-6842-1) was analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 09/19/2012.

No difficulties were encountered during the % solids analysis. All quality control parameters were within the acceptance limits.

Client: Duke Energy Corporation
Project/Site: Marshall Bottom Ash J12090236

TestAmerica Job ID: 490-6842-1

Job ID: 490-6842-1 (Continued)

Laboratory: TestAmerica Nashville (Continued)

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Definitions/Glossary

Page 14 of 34

Client: Duke Energy Corporation
Project/Site: Marshall Bottom Ash J12090236

TestAmerica Job ID: 490-6842-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

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Client: Duke Energy Corporation
Project/Site: Marshall Bottom Ash J12090236

TestAmerica Job ID: 490-6842-1

Client Sample ID: Bottom Ash

Lab Sample ID: 490-6842-1

Date Collected: 09/14/12 09:15

Matrix: Solid

Date Received: 09/18/12 09:00

Percent Solids: 59.8

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.166	mg/Kg	☆	09/21/12 09:40	09/21/12 13:52	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	40		0.10	%			09/19/12 12:34	1
Percent Solids	60		0.10	%			09/19/12 12:34	1

QC Sample Results

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Client: Duke Energy Corporation
Project/Site: Marshall Bottom Ash J12090236

TestAmerica Job ID: 490-6842-1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Lab Sample ID: MB 490-21947/1-A

Matrix: Solid

Analysis Batch: 22224

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21947

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0971	mg/Kg		09/21/12 09:40	09/21/12 13:48	1

Lab Sample ID: LCS 490-21947/2-A

Matrix: Solid

Analysis Batch: 22224

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21947

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.163	0.1479		mg/Kg		91	80 - 120

Lab Sample ID: 490-6842-1 MS

Matrix: Solid

Analysis Batch: 22224

Client Sample ID: Bottom Ash

Prep Type: Total/NA

Prep Batch: 21947

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.275	0.2711		mg/Kg	☼	98	80 - 120

Lab Sample ID: 490-6842-1 MSD

Matrix: Solid

Analysis Batch: 22224

Client Sample ID: Bottom Ash

Prep Type: Total/NA

Prep Batch: 21947

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.276	0.2583		mg/Kg	☼	94	80 - 120	5	20

Method: Moisture - Percent Moisture

Lab Sample ID: 490-6804-A-1 DU

Matrix: Solid

Analysis Batch: 21270

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	73		70		%		3	20
Percent Solids	28		30		%		7	20

QC Association Summary

Page 17 of 34

Client: Duke Energy Corporation
Project/Site: Marshall Bottom Ash J12090236

TestAmerica Job ID: 490-6842-1

Metals

Prep Batch: 21947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6842-1	Bottom Ash	Total/NA	Solid	7471B	
490-6842-1 MS	Bottom Ash	Total/NA	Solid	7471B	
490-6842-1 MSD	Bottom Ash	Total/NA	Solid	7471B	
LCS 490-21947/2-A	Lab Control Sample	Total/NA	Solid	7471B	
MB 490-21947/1-A	Method Blank	Total/NA	Solid	7471B	

Analysis Batch: 22224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6842-1	Bottom Ash	Total/NA	Solid	7471B	21947
490-6842-1 MS	Bottom Ash	Total/NA	Solid	7471B	21947
490-6842-1 MSD	Bottom Ash	Total/NA	Solid	7471B	21947
LCS 490-21947/2-A	Lab Control Sample	Total/NA	Solid	7471B	21947
MB 490-21947/1-A	Method Blank	Total/NA	Solid	7471B	21947

General Chemistry

Analysis Batch: 21270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6804-A-1 DU	Duplicate	Total/NA	Solid	Moisture	
490-6842-1	Bottom Ash	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Duke Energy Corporation
Project/Site: Marshall Bottom Ash J12090236

TestAmerica Job ID: 490-6842-1

Client Sample ID: Bottom Ash
Date Collected: 09/14/12 09:15
Date Received: 09/18/12 09:00

Lab Sample ID: 490-6842-1
Matrix: Solid
Percent Solids: 59.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			21947	09/21/12 09:40	LB	TAL NSH
Total/NA	Analysis	7471B		1	22224	09/21/12 13:52	LB	TAL NSH
Total/NA	Analysis	Moisture		1	21270	09/19/12 12:34	RS	TAL NSH

Laboratory References:
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Duke Energy Corporation
Project/Site: Marshall Bottom Ash J12090236

TestAmerica Job ID: 490-6842-1

Method	Method Description	Protocol	Laboratory
7471B	Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	SW846	TAL NSH
Moisture	Percent Moisture	EPA	TAL NSH

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Page 20 of 34

Client: Duke Energy Corporation
Project/Site: Marshall Bottom Ash J12090236

TestAmerica Job ID: 490-6842-1

Laboratory: TestAmerica Nashville

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
	ACIL		393	10-30-12
A2LA	ISO/IEC 17025		0453.07	12-31-13
Alabama	State Program	4	41150	05-31-13
Alaska (UST)	State Program	10	UST-087	07-24-13
Arizona	State Program	9	AZ0473	05-05-13
Arkansas DEQ	State Program	6	88-0737	04-25-13
California	NELAC	9	1168CA	10-31-12
Canadian Assoc Lab Accred (CALA)	Canada		3744	03-08-14
Colorado	State Program	8	N/A	02-28-13
Connecticut	State Program	1	PH-0220	12-31-13
Florida	NELAC	4	E87358	06-30-13
Illinois	NELAC	5	200010	12-09-12
Iowa	State Program	7	131	05-01-14
Kansas	NELAC	7	E-10229	10-31-12
Kentucky	State Program	4	90038	12-31-12
Kentucky (UST)	State Program	4	19	09-15-13
Louisiana	NELAC	6	LA110014	12-31-12
Louisiana	NELAC	6	30613	06-30-13
Maryland	State Program	3	316	03-31-13
Massachusetts	State Program	1	M-TN032	06-30-13
Minnesota	NELAC	5	047-999-345	12-31-12
Mississippi	State Program	4	N/A	06-30-13
Montana (UST)	State Program	8	NA	01-01-15
Nevada	State Program	9	TN00032	09-30-13
New Hampshire	NELAC	1	2963	10-09-12
New Jersey	NELAC	2	TN965	06-30-13
New York	NELAC	2	11342	04-01-13
North Carolina DENR	State Program	4	387	12-31-12
North Dakota	State Program	8	R-146	06-30-13
Ohio VAP	State Program	5	CL0033	01-19-14
Oklahoma	State Program	6	9412	08-31-13
Oregon	NELAC	10	TN200001	04-30-13
Pennsylvania	NELAC	3	68-00585	06-30-13
Rhode Island	State Program	1	LAO00268	12-30-12
South Carolina	State Program	4	84009 (001)	02-28-13
South Carolina	State Program	4	84009 (002)	02-23-14
Tennessee	State Program	4	2008	02-23-14
Texas	NELAC	6	T104704077-09-TX	08-31-13
USDA	Federal		S-48469	11-02-13
Utah	NELAC	8	TAN	06-30-13
Virginia	NELAC	3	460152	06-14-13
Washington	State Program	10	C789	07-19-13
West Virginia DEP	State Program	3	219	02-28-13
Wisconsin	State Program	5	998020430	08-31-13
Wyoming (UST)	A2LA	8	453.07	12-31-13

Login Sample Receipt Checklist

Client: Duke Energy Corporation

Job Number: 490-6842-1

Login Number: 6842

List Source: TestAmerica Nashville

List Number: 1

Creator: McBride, Mike

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Refer to Job Narrative for details.
Cooler Temperature is acceptable.	False	Cooler temperature outside required temperature criteria.
Cooler Temperature is recorded.	True	19.4c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

October 4, 2012

Duke Energy
ATTN: Jay Perkins
Scientific Support-Laboratory
13339 Hagers Ferry Road
Huntersville NC 28078
jcperkins@duke-energy.com
labcustomer@duke-energy.com

RE: Project DUK-HV1201

Client Project: J12090236

Dear Mr. Perkins,

On September 18, 2012, Brooks Rand Labs (BRL) received two (2) wastewater samples and three (3) corresponding field blanks. The samples were logged-in for total Hg analysis. All samples were received, prepared, analyzed, and stored according to BRL SOPs and EPA methodology.

The results were blank-corrected as described in the calculations section of the relevant SOP and may have been evaluated using reporting limits that have been adjusted to account for sample aliquot size. Please refer to the *Sample Results* page for sample-specific MDLs, MRLs, and other details.

In sequence 1200745, all analyses following continuing calibration verification (CCVA) standard were not within the instrument calibration. All samples were re-analyzed in sequence 1200753. Aside from concentration qualifiers, all data was reported without qualification and all associated quality control sample results met the acceptance criteria.

BRL, an accredited laboratory, certifies the reported results of all analyses for which BRL is NELAP accredited meet all NELAP requirements. For more details, see the *Report Information* page of the report. Please feel free to contact me if you have any questions regarding this report.

Sincerely,



Tiffany Stilwater
Project Manager
tiffany@brooksrand.com

Report Information

Laboratory Accreditation

BRL is accredited by the *National Environmental Laboratory Accreditation Program* (NELAP) through the State of Florida Department of Health, Bureau of Laboratories (E87982) and is certified to perform many environmental analyses. BRL is also certified by many other states to perform environmental analyses. For a current list of our accreditations/certifications, please visit our website at <http://www.brooksrand.com/default.asp?contentID=586>. Results reported relate only to the samples listed in the report.

Field Quality Control Samples

Please be notified that certain EPA methods require the collection of field quality control samples of an appropriate type and frequency; failure to do so is considered a deviation from some methods and for compliance purposes should only be done with the approval of regulatory authorities. Please see the specific EPA methods for details regarding required field quality control samples.

Common Abbreviations

BLK	method blank	MS	matrix spike
BRL	Brooks Rand Labs	MSD	matrix spike duplicate
BS	laboratory fortified blank	ND	non-detect
CAL	calibration standard	NR	non-reportable
CCV	continuing calibration verification	PS	post preparation spike
COC	chain of custody record	REC	percent recovery
CRM	certified reference material	RPD	relative percent difference
D	dissolved fraction	RSD	relative standard deviation
DUP	duplicate	SCV	secondary calibration verification
ICV	initial calibration verification	SOP	standard operating procedure
MDL	method detection limit	SRM	standard reference material
MRL	method reporting limit	T	total recoverable fraction

Definition of Data Qualifiers

(Effective 9/23/09)

B	Detected by the instrument, the result is > the MDL but ≤ the MRL. Result is reported and considered an estimate.
E	An estimated value due to the presence of interferences. A full explanation is presented in the narrative.
H	Holding time and/or preservation requirements not met. Result is estimated.
J	Estimated value. A full explanation is presented in the narrative.
J-M	Duplicate precision (RPD) for associated QC sample was not within acceptance criteria. Result is estimated.
J-N	Spike recovery for associated QC sample was not within acceptance criteria. Result is estimated.
M	Duplicate precision (RPD) was not within acceptance criteria. Result is estimated.
N	Spike recovery was not within acceptance criteria. Result is estimated.
R	Rejected, unusable value. A full explanation is presented in the narrative.
U	Result is ≤ the MDL or client requested reporting limit (CRRL). Result reported as the MDL or CRRL.
X	Result is not BLK-corrected and is within 10x the absolute value of the highest detectable BLK in the batch. Result is estimated.

These qualifiers are based on those previously utilized by Brooks Rand Labs, those found in the EPA SOW ILM03.0, Exhibit B, Section III, pg. B-18, and the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review; USEPA; January 2010. These supersede all previous qualifiers ever employed by BRL.



Sample Information

Sample	Lab ID	Report Matrix	Type	Sampled	Received
Source Water	1238008-01	FGD Wastewater	Sample	09/14/2012	09/18/2012
Source Water Hg Blk	1238008-02	DIW	Field Blank	09/14/2012	09/18/2012
Bottom Ash Sluice Water	1238008-03	FGD Wastewater	Sample	09/14/2012	09/18/2012
Bottom Ash Sluice Water Hg Blk	1238008-04	DIW	Field Blank	09/14/2012	09/18/2012
Trip Blank	1238008-05	DIW	Trip Blank	09/14/2012	09/18/2012

Batch Summary

Analyte	Lab Matrix	Method	Prepared	Analyzed	Batch	Sequence
Hg	Water	EPA 1631	09/21/2012	09/27/2012	B121721	1200745
Hg	Water	EPA 1631	09/21/2012	10/01/2012	B121721	1200753

Sample Results

Sample	Analyte	Report Matrix	Basis	Result	Qualifier	MDL	MRL	Unit	Batch	Sequence
Bottom Ash Sluice Water										
1238008-03	Hg	FGD Wastewater	T	0.80		0.16	0.43	ng/L	B121721	1200753
Bottom Ash Sluice Water Hg Blk										
1238008-04	Hg	DIW	T	0.15	U	0.15	0.41	ng/L	B121721	1200745
Source Water										
1238008-01	Hg	FGD Wastewater	T	0.15	U	0.15	0.41	ng/L	B121721	1200753
Source Water Hg Blk										
1238008-02	Hg	DIW	T	0.15	U	0.15	0.40	ng/L	B121721	1200745
Trip Blank										
1238008-05	Hg	DIW	T	0.15	U	0.15	0.41	ng/L	B121721	1200745

Accuracy & Precision Summary

Batch: B121721
Lab Matrix: Water
Method: EPA 1631

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B121721-SRM1	Certified Reference Material (1237042, NIST 1641d 1000x dilution)						
	Hg		15.68	14.56	ng/L	93% 85-115	
B121721-MS4	Matrix Spike (1233044-17)						
	Hg	2.48	19.91	18.20	ng/L	79% 71-125	
B121721-MSD4	Matrix Spike Duplicate (1233044-17)						
	Hg	2.48	21.14	19.78	ng/L	82% 71-125	8% 24

Method Blanks & Reporting Limits

Batch: B121721
Matrix: Water
Method: EPA 1631
Analyte: Hg

Sample	Result	Units		
B121721-BLK1	0.25	ng/L		
B121721-BLK2	0.21	ng/L		
B121721-BLK3	0.22	ng/L		
B121721-BLK4	0.21	ng/L		
Average: 0.22		Standard Deviation: 0.02		MDL: 0.15
Limit: 0.50		Limit: 0.10		MRL: 0.41



Instrument Calibration

Sequence: 1200745
Instrument: THG-05
Date: 09/27/2012
Analyte: Hg

Total Mercury and Mercury Speciation by CVAFS
Method: EPA 1631

Lab ID	True Value	Result	Units	REC & Limits	
1200745-IBL1		0.50	pg of Hg		
1200745-IBL2		1.64	pg of Hg		
1200745-IBL3		2.61	pg of Hg		
1200745-IBL4		2.96	pg of Hg		
1200745-CAL1	10.00	9.73	pg of Hg	97%	
1200745-CAL2	25.00	24.35	pg of Hg	97%	
1200745-CAL3	100.0	98.68	pg of Hg	99%	
1200745-CAL4	500.0	503.0	pg of Hg	101%	
1200745-CAL5	2500	2604	pg of Hg	104%	
1200745-CAL6	10000	10220	pg of Hg	102%	
1200745-CCV1	500.0	516.9	pg of Hg	103%	77-123
1200745-CCB2		7.03	pg of Hg		
1200745-CCB3		5.08	pg of Hg		
1200745-CCB4		6.32	pg of Hg		
1200745-CCB5		7.44	pg of Hg		
1200745-CCB6		8.07	pg of Hg		
1200745-ICV2	1568	1456	pg of Hg	93%	85-115
1200745-CCV2	500.0	526.7	pg of Hg	105%	77-123
1200745-CCB7		9.95	pg of Hg		
1200745-CCV3	500.0	502.2	pg of Hg	100%	77-123
1200745-CCB8		5.84	pg of Hg		
1200745-CCV4	500.0	491.1	pg of Hg	98%	77-123
1200745-CCB9		4.40	pg of Hg		
1200745-CCV5	500.0	498.9	pg of Hg	100%	77-123
1200745-CCBA		3.47	pg of Hg		
1200745-CCV6	500.0	501.7	pg of Hg	100%	77-123
1200745-CCBB		3.20	pg of Hg		
1200745-CCV7	500.0	506.4	pg of Hg	101%	77-123
1200745-CCBC		3.65	pg of Hg		
1200745-CCV8	500.0	490.4	pg of Hg	98%	77-123
1200745-CCBD		5.13	pg of Hg		
1200745-CCV9	500.0	505.2	pg of Hg	101%	77-123
1200745-CCBE		5.18	pg of Hg		
1200745-CCVA	500.0	503.1	pg of Hg	101%	77-123
1200745-CCBF		3.68	pg of Hg		



Instrument Calibration

Sequence: 1200753
Instrument: THG-05
Date: 10/01/2012
Analyte: Hg

Total Mercury and Mercury Speciation by CVAFS
Method: EPA 1631

Lab ID	True Value	Result	Units	REC & Limits	
1200753-IBL1		2.70	pg of Hg		
1200753-IBL2		3.39	pg of Hg		
1200753-IBL3		5.65	pg of Hg		
1200753-IBL4		6.57	pg of Hg		
1200753-CAL1	10.00	10.85	pg of Hg	108%	
1200753-CAL2	25.00	27.18	pg of Hg	109%	
1200753-CAL3	100.0	95.29	pg of Hg	95%	
1200753-CAL4	500.0	497.1	pg of Hg	99%	
1200753-CAL5	2500	2433	pg of Hg	97%	
1200753-CAL6	10000	9663	pg of Hg	97%	
1200753-ICV1	1568	1500	pg of Hg	96%	85-115
1200753-CCB1		13.3	pg of Hg		
1200753-CCV1	500.0	504.8	pg of Hg	101%	77-123
1200753-CCB2		9.67	pg of Hg		
1200753-CCB3		7.86	pg of Hg		
1200753-CCB4		8.27	pg of Hg		
1200753-CCV2	500.0	516.4	pg of Hg	103%	77-123
1200753-CCB5		8.38	pg of Hg		
1200753-CCV3	500.0	491.0	pg of Hg	98%	77-123
1200753-CCB6		5.68	pg of Hg		
1200753-CAL7	12000	11530	pg of Hg	96%	
1200753-CCV4	500.0	498.8	pg of Hg	100%	77-123
1200753-CCB7		13.6	pg of Hg		



Sample Containers

Lab ID: 1238008-01		Report Matrix: FGD Wastewater		Collected: 09/14/2012	
Sample: Source Water		Sample Type: Sample		Received: 09/18/2012	
Des	Container	Size	Lot	Preservation	P-Lot
A	Bottle FLPE Hg-T	250 mL	71659890	None	N/A
			20		
Lab ID: 1238008-02		Report Matrix: DIW		Collected: 09/14/2012	
Sample: Source Water Hg Blk		Sample Type: Field Blank		Received: 09/18/2012	
Des	Container	Size	Lot	Preservation	P-Lot
A	Bottle FLPE Hg-T	250 mL	71659890	None	N/A
			20		
Lab ID: 1238008-03		Report Matrix: FGD Wastewater		Collected: 09/14/2012	
Sample: Bottom Ash Sluice Water		Sample Type: Sample		Received: 09/18/2012	
Des	Container	Size	Lot	Preservation	P-Lot
A	Bottle FLPE Hg-T	500 mL	71666330	None	N/A
			10		
Lab ID: 1238008-04		Report Matrix: DIW		Collected: 09/14/2012	
Sample: Bottom Ash Sluice Water Hg Blk		Sample Type: Field Blank		Received: 09/18/2012	
Des	Container	Size	Lot	Preservation	P-Lot
A	Bottle FLPE Hg-T	250 mL	71659890	None	N/A
			20		
Lab ID: 1238008-05		Report Matrix: DIW		Collected: 09/14/2012	
Sample: Trip Blank		Sample Type: Trip Blank		Received: 09/18/2012	
Des	Container	Size	Lot	Preservation	P-Lot
A	Bottle FLPE Hg-T	250 mL	71659890	None	N/A
			20		

Project ID: DUK-HV1201
PM: Tiffany Stilwater



Page 32 of 34
Client PM: Jay Perkins
Client PO: 141391

Shipping Containers

Cooler

Received: September 18, 2012 8:45
Tracking No: 5353 0519 4200 via FedEx
Coolant Type: None
Temperature: ambient

Description: Cooler
Damaged in transit? No
Returned to client? No

Custody seals present? No
Custody seals intact? No
COC present? Yes



CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

1238008 Page 38 of 34

Analytical Laboratory Services

Mail Code MGO3A2 (Building 7405)
13339 Hagers Ferry Rd
Huntersville, N. C. 28078
(980) 875-5245
Fax: (980) 875-4349

Analytical Laboratory Use Only

Work Order: J12090236 Matrix: Other
Logged By: RLB Date & Time: 9/14/12 1358
Samples Originating From: NC SC OH
SAMPLE PROGRAM: Ground Water NPDES Plant
Other: RCRA Waste

Page 1 of 1
DISTRIBUTION
ORIGINAL to LAB,
COPY to CLIENT

1) Project Name: Marshall (Bottom Ash/Sluice -UWAG)
2) Phone No:
3) Client: Allen Stowe, Donna Burrell
4) Fax No:
5) Business Unit:
6) RC to: FOPR
7) Mail Code:
8) Project:
9) Activity:
10) Process: BENVWT

Brooks Rand
PO#141391

Test America
PO# 225674

Cooler Temp (C)

15 Preserv.: 1=HCl
2=H₂SO₄ 3=HNO₃
4=Ice 5=None

delete all
BAS.

16 Analyses
Required

LL Hg (Brooks Rand)

TRM/ICP=Al, Ba, B, Sn
Ca, Fe, Mg, Mn, Na, K,

TRM/IMS=Sb, As, Be, Cd,
Cr, CO, Cu, Pb, Mo, Ni,
Se, Ag, Sr, Ti, Zn

Hg - 7471 (Brooks Rand)

ICP/SED=Al, Sb, Ba, Be,
B, Ca, Cd, Cr, Co, Cu, Fe,
Mg, Mn, Mo, Ni, K, Na,
Se, Ag, Ti, Se, Sr, Ti, Zn

20 Total # of Containers

LAB USE ONLY

11 Lab ID

2012019999

2012020000

0102

0203

0304

04

2012020005

Customer to complete appropriate columns to right

12 Chem Desktop No.	13 Sample Description or ID	14 Collection Information	17 Comp.	18 Grab	19 LL Hg (Brooks Rand)	20 Total # of Containers
	Source Water	9/14/12 0955				
	Source Water Hg Blk	0952	x	1	1	1
	Bottom Ash Sluice Water	0915	x	1	1	1
	Bottom Ash Sluice Water Hg Blk	0740	x	1	1	1
	Trip Blank	NA				
	Field Blank	0745	x	1	1	1
	Bottom Ash	0915	x	1	1	1

Collect each
above location in
a single 500 ml
bottle

21) Relinquished By: [Signature] Date/Time: 9-14-12 1345
Relinquished By: [Signature] Date/Time: 9/17/12 1300
Relinquished By: [Signature] Date/Time: 9/17/12 1300
Sealed/Locked By: [Signature] Date/Time: 9/17/12 1300
24) Comments: Hg composite was collected as 4 discrete grabs @ 0742, 0800, 0816, 0831. Grabs were composited later in laboratory.
Accepted By: [Signature] Date/Time: 9-14-12 1345
Accepted By: [Signature] Date/Time: 9/18/12 0845
Sealed/Lock Opened By: [Signature] Date/Time: 9/18/12 0845
22) Requested Turnaround
28 Days ☒
7 Days ☐
48 Hr ☐

9-24-12

